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valid point of view, but there may be others misinterpreting the author's intent in a manner similar to mine—they had better be warned.

Within the above mentioned framework the presentation is essentially mathematico-philosophical. The chapter headings give a vague indication of the contents: (1) Adequation of a Physical Theory, (2) General Theory of Previsions, (3) The Spectral Decomposition, (4) Open Character of a Wave Mechanics, (5) Objectivistic Measurements and Schemes, (6) Previsional Interpretation and Realistic Interpretation, (7) Microphysics and Cosmology, (8) The Functional Representation, (9) Considerations of Logical Structure, (10) The Method of Associated Fluid by Destouches.

One of the aims of the book is to revive an early interpretation of de Broglie relative to the pilot-wave with double solution. As related in the introduction, this interpretation was put forward by de Broglie as early as 1926, but abandoned in consequence of discussions at the 1927 Solvay Congress in favor of more statistical considerations. The revival of these early ideas was probably started by Rosen in 1945 and more actively pursued by Bohm in 1952. Recent work of de Broglie, of Destouches and now of Mme. F  vrier indicates a definite tendency away from "indeterminism" and toward what Mme. F  vrier calls: "a change in the epistemological climate". How permanent that tendency will be is hard to predict; 25 years or more of wave mechanics were spent in an atmosphere of indeterministic considerations and no one will deny the eminently successful treatment of many physical phenomena by the existing quantum theories. On the other hand, to quote David Bohm: "a choice" between "a single precisely defined conceptual model" or a renouncement of any possibility of such a model "is conceivable in domains, such as those associated with dimensions of the order of 10^{-13} cm, where the extrapolation of the present theory seems to break down". In that sense it is good to see efforts toward a return of "realism and determinism" as expressed by Mme. F  vrier.

Many passages of this book are quite thought provoking. It is therefore a pleasure to recommend this book to the attention of those who are interested in the interpretations of modern physical theories as well as the attention of those who like to follow the development of the ideas of de Broglie's school.

The Meaning of Relativity (Fifth Edition). By Albert Einstein. 169 pp. Princeton U. Press, Princeton, N. J., 1955. \$3.75. Reviewed by E. R. Cohen, *Atomics International*.

In May 1921 Albert Einstein delivered a series of lectures at Princeton University on the broad topic of relativity. The lectures form a unified survey of the basic concepts of relativity. Beginning with the pre-relativity physics of Newton (or perhaps more correctly, the "three dimensional" relativity of Newton) Einstein lays the foundation for "four dimensional"



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relativity primarily from the postulational standpoint. The development of special relativity is followed by the formulation of the general theory leading up to the Schwarzschild line element and the cosmological problem.

In the second edition (1945) an appendix was added which brought the general theory up to date, and with the present (fifth) edition a second appendix has been added to discuss the developments of the nonsymmetric field which has occupied so much effort in recent years. This appendix is the major reason for bringing out a new edition at this time. Shortly before his death, Einstein succeeded "in simplifying the derivations as well as the form of the field equations. The whole theory becomes thereby more transparent." The major difficulty in unified field theories becomes immediately evident—the lack of experimental evidence. We have succeeded in constructing a logical description of a universe—perhaps several universes; the question still remains which one, if any, will turn out to be an adequate description of the universe in which we live. As yet the astronomers have not found the necessary evidence to choose between them. The possibility of constructing more complex field theories is mentioned, but Einstein rejects these (for the present) on the basis that such complication should be introduced only when there exists physical-empirical reasons to do so. The nonsymmetric character of the field was introduced only because the symmetric field could not yield, in itself, an adequate physical description. To add complexity before it is needed violates the truly fundamental axiom of relativity, that of maximum simplification.

This slim book is not to be considered as a text (to be compared with Bergman's *Introduction of Relativity* for example) but rather as a condensed unified presentation intended for one who has already gone through a standard text and digested the mechanics of tensor theory and the physical basis of relativity. Einstein's little book then serves as an excellent tying-together of loose ends and as a broad survey of the subject.

Introduction to Modern Physics (5th Edition). By F. K. Richtmyer, E. H. Kennard, and T. Lauritsen. 666 pp. McGraw-Hill Book Co., Inc., New York, 1955. \$8.50. Reviewed by Malcolm L. Stitch, Hughes Aircraft Company.

The number of pages in the present edition of this venerable war-horse has actually been decreased by 93. This has been accomplished by a general "tightening up" in the range of the subject matter while in some cases (e.g., "Wave Mechanics") increasing the depth of the discussion.

In keeping with the title there is more correlation in this edition between the space devoted to topics in a given field and the research activity in these fields. Thus "X-rays" have been abbreviated, while "The Nucleus" and "Cosmic Rays" have been slightly increased in number of pages of this smaller book. "Electromagnetic Theory" as a branch of classical physics